DOCUMENT RESUME

ED 166 216 TM 007 915

AUTHOR Woollatt, Lorne H.
TITLE The Quality of Schooling. An Analysis of the Quality of New York State Elementary and Secondary Education. Occasional Paper #23.
PUB DATE 77
NOTE 42p.

EDRS PRICE MF-$0.83 HC-$2.06 Plus Postage.
DESCRIPTORS Academic Achievement; *Achievement Rating; *Educational Quality; Elementary Secondary Education; National Norms; *Scores; *Standardized Tests; *State Surveys; *Student Evaluation; Testing Programs
IDENTIFIERS *New York

ABSTRACT

Data were collected from a number of sources evaluating the performance of elementary and secondary school students in New York State. Comparison of New York students against the other 49 states, and of various regions within New York state, led to the following conclusions. New York state produced a larger number of high-scoring students on college entrance examinations than any other state. Advanced Placement Examinations data indicated that New York state high school students also led in qualifying for college credits. New York high school graduates outperformed the other states in the National Merit and Achievement Scholarship Programs, and formed a large proportion of the Westinghouse Science Talent Search selections. Within the state, the metropolitan New York City area, Albany, and the Binghamton-Ithaca region led in mathematics and reading test scores. The schools in the western portion of the state appeared to be doing the most to overcome demographic conditions. New York City represented a paradox: performance on the Pupil Evaluation Program was far below the state average, yet the city's high school graduates outperformed the entire United States in the Westinghouse Science Talent Search.
(Author/GDC)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED166216

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

OCCASIONAL PAPER #23

THE QUALITY OF SCHOOLING

AN ANALYSIS OF THE QUALITY OF NEW YORK STATE ELEMENTARY AND SECONDARY EDUCATION

LORNE H. WOOLLATT

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

J. Miller

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

TM 007 915

Public Law 93-380,
Section 842 Staff:

Orlando F. Furno, Director
William J. Fowler, Jr.
James M. Gaughan
Robert D. Hennigan

TABLE OF CONTENTS

	Page
EDUCATIONAL QUALITY IN NEW YORK STATE (1977)	2
COST-QUALITY RELATIONSHIPS	3
HIGH SCHOOL GRADUATES	6
ADMISSION TESTING PROGRAM COLLEGE ENTRANCE EXAMINATION BOARD	8
ADVANCED PLACEMENT EXAMINATIONS	10
NATIONAL MERIT AND ACHIEVEMENT SCHOLARSHIP PROGRAMS	13
National Merit Scholarships	13
WESTINGHOUSE SCIENCE TALENT SEARCH	16
STANDARDIZED TESTS	18
NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS	22
PUPIL EVALUATION PROGRAM	29
PUPIL EVALUATION PROGRAM ADJUSTED FOR SOCIOECONOMIC INFLUENCES	35
SUMMARY	39

OCCASIONAL PAPER #23

THE QUALITY OF SCHOOLING

AN ANALYSIS OF THE QUALITY OF NEW YORK STATE ELEMENTARY AND SECONDARY EDUCATION

EDUCATIONAL QUALITY IN NEW YORK STATE (1977)

Over a hundred years ago a midwest superintendent of schools was needled by citizens to show that the schools were delivering. The outcome was the first spelling test. Progress in further testing was slow until Binet devised tests of mental capacity for Paris slow learners after the turn of the century. Binet's standardization and scaling refinements were imported into the United States by Terman, resulting in the invention of the Stanford-Binet test of intelligence. Comparable techniques were adapted to the measurement of achievement in spelling, reading, arithmetic. Then innovative methods were used to scale such relatively abstruse skills as handwriting and composition. About 1910 great city school systems began to install systems of standardized testing, Baltimore and New York City being the first. The movement spread to other districts as the scientific method of educational measurement was aided by the American Association for the Advancement of Science and the American Educational Research Association. To coordinate local activities, state educational agencies began to employ test administration specialists, the New York State Education Department being the first.

The primary purpose of the new testing movement was to help students and teachers in the learning and teaching processes. However, the technique of aggregating data led to evaluating teachers, schools, and school systems.

The use of tests to compare the outputs of state school systems never came to fruition. Over time a varied multiplicity of test instruments was developed by various organizations. Proprietary tests appeared to be more feasible since commercial enterprises were more adapted to bearing heavy development and standardization costs, to distribute and even to score and analyze massive programs. Further, a reluctance still exists among districts and states to be compared with one another.[1]

COST-QUALITY RELATIONSHIPS

The present report is a component of a study to determine the extent to which the expenditure for education in New York State produces quality results. Cost-quality studies have a sixty year history.

From 1918 through 1957 at least 28 studies dealt with the relationship between cost per pupil and the quality of education. Seven studies were national in scope, seven were conducted in New York State, one in each of nine other states (Connecticut, Illinois, Kentucky, Maine, Mississippi, New Jersey, Pennsylvania, Rhode

---

[1] Incidentally, some comparison among nations was done about 1940, principally by Harold Clark of Teachers College, Columbia, and the U.S. Chamber of Commerce. The studies showed that states and countries with higher educational expenditures achieved higher per capita incomes.

Island, West Virginia) and five in the metropolitan area of New York City.

In 1920 Leonard P. Ayres reported an index number for each of the 48 state school systems. The index was made up of five items of a financial nature and five other items which were non-financial in character. Though it was not Ayres' purpose to analyze the education returns for money spent, he did compute a coefficient of correlation between the financial and non-financial items on the basis of the scores for the 48 states. This correlation was .78, an indication that those states in which the expenditure per unit of educational need was high were keeping the schools open for more days per annum, were attracting a larger percentage of the children to the schools, and were securing better attendance than were the states in which expenditure per pupil was low. It also indicates that half the non-financial characteristics are explained by financial ones; half by unmeasured characteristics.

In 1955 Benjamin S. Bloom, still Professor of the University of Chicago, reported relating scores on the Tests of General Educational Development to dollars per pupil expended for education in the 48 states. He reported a general relation with some qualification saying, " ... the eleven lowest states on the GED tests spend less than $200 per pupil (1950-51). However, it is instructive to note that several states spending less than $200 per pupil rank relatively high on the test results; also that three of the top four states on the GED tests approximate the average expenditure per pupil. Thus, although there is a relatively high relation between financial support for education and level of learning of

high school Seniors as measured by these tests, there are enough exceptions to demonstrate that financial support is not the sole determiner of quality of education."

In 1945 Lorne H. Woollatt did a study of the cost-quality relationship in some 33 school districts in New York City and its metropolitan area, including some districts from New York and some from New Jersey; the lowest spending was in the upper third of public school expenditure per pupil in the United States; the highest of the 33 had the highest expenditure in the nation. The major finding was that cost and quality are related in the upper ranges of national expenditure. Further, it was found that (1) the basic skills and knowledge acquisition showed a steady rise with expenditure, while (2) special aptitudes and behavior patterns showed a rise from lower to upper expenditure extremes, but a plateau in the mid-expenditure range. Apparently, some new elements in a school program require a great amount of fiscal effort at certain stages in their development.

Forty years of study revealed that higher quality required higher expenditure.

A variety of instruments and techniques have been used in measuring quality in and among states. Early measures included length of school year, attracting, attendance, and holding power of students. Then various tests were, and still are, used. Observation checklists were used beginning in the 1930's in a number of states. The latest techniques developed by the National Assessment of Educational Progress include controlled individual and group interview and performance tests (as in music).

HIGH SCHOOL GRADUATES

The first four of the quality measures described below depend upon comparison of New York State with other states or the nation in terms of percent of high school graduates. For that reason, a table showing large states with big cities and states contiguous to New York follow.

HIGH SCHOOL GRADUATES

1973-74[a]

AREA	PUBLIC	NONPUBLIC	TOTAL	PERCENT OF U.S. PUBLIC	PERCENT OF U.S. NON-PUBLIC	PERCENT OF U.S. TOTAL
U.S.	2,762,000	300,000	3,062,000			
California	268,493	19,500	287,993	9.7	6.5	9.4
New Jersey	91,938	12,900	104,838	3.3	4.3	3.4
Connecticut	39,171	7,700	46,871	1.4	2.6	1.5
Pennsylvania	160,600	31,500	192,100	5.8	10.5	6.3
Michigan	134,336	17,200	151,556	4.8	5.7	5.0
Illinois	139,104	24,300	163,404	5.0	8.1	5.3
Maryland	54,128	6,300	60,428	2.0	2.1	1.9
Ohio	153,874	18,600	172,474	5.6	6.2	5.6
Texas	156,984	5,700	162,684	5.7	1.9	5.3
New York	207,037	39,137	246,137	7.5	13.0	8.0

[a] National Center for Educational Statistics. Digest of Education Statistics, 1975 Edition, Table 61, p. 60. Pub. 1976 NCES 76-211.

ADMISSION TESTING PROGRAM
COLLEGE ENTRANCE EXAMINATION BOARD

In 1975-76 more than one million students about to enroll in institutions of higher learning participated in the College Board's Admission Testing Program (ATP). The students took the Scholastic Aptitude Test and each responded to a Questionnaire describing such information as interests, skills, aspirations, activities, financial status, and academic study and honors. Many also took one or more Achievement Tests. Reports were sent to each student, his high school, and to the colleges and scholarship sponsors he designated.

ATP summary reports are sent to high schools and school districts.

Summary Reports are prepared for each state and region. The New York State Education Department receives Nation, Middle States, and New York State Reports. No interstate report is made.

The number of New York State candidates was 132,000, or 13.2 percent of the national total. New Yorkers in various subjects numbered from 82 in Russian to 29,213 in English Composition.

New York scores were somewhat above the national averages in Scholastic Aptitude; about average in Written English; 25 points above Average Achievement; more than 30 points above in Biology, Mathematics Level 1, Chemistry, German, and American History, 26 to 27 points above in Physics, Spanish, and French, and 4 to 15 points above in Literature, English Composition, Mathematics Level 2, and European History.

Latin, Hebrew, and Russian involved 115,330, and 82 New Yorkers respectively, but scores were 40, 36 and 55 above national average.

COLLEGE ENTRANCE EXAMINATION BOARD

TEST		SCORE U.S.	SCORE N.Y.	Diff.	N.Y. AS % OF NUMBER TAKING
Scholastic Aptitude	(132)[a]				
Verbal	(132)	431	437	6	13.2%
Mathematics	(132)	472	484	12	13.2%
Standard Written English[b]		43.1	42.9	-0.2	13.2
Achievement					
Average	(33)[a]	538	563	25	14.3
English Composition	(29)	532	542	10	13.7
Literature	(2)	525	540	15	12.1
Mathematics Level 1	(22)	546	585	39	13.8
Mathematics Level 2[c]	(3)	665	680	15	9.1
Biology	(9)	543	602	59	19.2
Chemistry	(7)	567	601	34	20.3
Physics	(2)	592	618	26	15.9
American History	(6)	493	525	32	10.1
European History	(3)	531	535	4	17.2
Spanish	(26)	547	574	27	13.0
French	(31)	553	580	27	11.9
German	(6)	555	589	34	7.8

[a] ( ) Number New York State Candidates in thousands.

[b] Experimental use for purposes of placement.

[c] Accelerated program; more than three years college-preparation mathematics.

Admissions Testing Program of the College Entrance Examination Board: College-Bound Seniors, 1975-76 (1) National Report, and (2) New York Summary Report.

ADVANCED PLACEMENT EXAMINATIONS

Advanced Placement Examinations are provided for high school students who have mastered college-level material. The results are generally accepted in lieu of some college credits. In 1975-76 New York candidates comprised 21.2 percent of candidates and 21.7 percent of papers written. The second state was California with 12.9 percent of candidates, 12.2 percent of papers.[1] This is no accident of time--New York students acocunted for 23 percent of advanced placement students nationwide in 1966 when New York had 10 percent of the nation's eligible enrollment.[2] Further, New Yorkers were high in quality for they constituted 40 percent of the Extremely Well Qualified (Scoring Grade 5) nationally in biology, 20 to 31 percent in 9 other subjects and 17 percent in French Language. (NOTE: Other subjects involved only 199 to 574 candidates in toto.)[3]

---

1 1973-74 high school graduates (public and non-public) as a percent of national graduates was 8.0 percent for New York, 9.4 percent for California.

2 University of the State of New York, State Education Department, Albany, N.Y. Investment and Return, Public Education, New York State, March 1967, p. 14.

3 CEEB. Advanced Placement Examinations. Distribution of Candidates Grades - May 1976. Single page (1) National, (2) New York State.

ADVANCED PLACEMENT EXAMINATIONS
1975-76

	CANDIDATES		PAPERS	
	NUMBER	PERCENT	NUMBER	PERCENT
U.S.	75,651		98,898	
California	9,773	12.9	12,089	12.2
Connecticut	2,151	2.8	2,839	2.9
Illinois	4,940	6.5	6,809	6.9
Michigan	2,780	3.7	3,589	3.6
New Jersey	3,385	4.5	4,480	4.5
Pennsylvania	4,722	6.2	6,183	5.2
New York	16,090	21.2	21,448	21.7

College Entrance Examination Board.
May 1974 Advanced Placement Examinations

ADVANCED PLACEMENT GRADES
MAY 1975

PERCENT OF NEW YORK STATE CANDIDATES OF NATIONAL CANDIDATES SCORING 5 (EXTREMELY WELL QUALIFIED)

	NUMBER		
	U.S.	N.Y.S.	PERCENT N.Y.S.
American History	1,709	422	25
Biology	1,707	678	40
Chemistry	815	225	28
English	3,155	583	19
European History	674	153	23
Mathematics			
Calculus A B	1,648	394	24
Calculus B C	1,345	349	26
Physics B	156	49	31
Spanish	204	51	25
French Language	249	41	17
French Literature	170	34	20

NATIONAL MERIT AND ACHIEVEMENT SCHOLARSHIP PROGRAMS

In 1955 the National Merit Scholarship Corporation was organized to focus upon young people throughout the United States who rank at the upper-most end of the academic ability scale.

In 1976 the program was supported by 575 corporations, foundations, professional associations, colleges, universities, unions, and trusts. In 21 years (1956-76) awards totaled $142.3 million. In 1976-77 some 15,600 winners attended about 850 U.S. institutions of higher education.

In 1964 the National Achievement Scholarship Program was added to identify and honor promising black students. In 12 years over $13 million has been awarded.

In 1976 the Corporation committed $13 million through the Merit Program, $1.6 million in the Achievement Program.

National Merit Scholarships

About one million students entered the 1976 competition. They had taken Preliminary Scholastic Aptitude Test/National Merit Scholarship Qualifying Test in October 1974. In September 1975, some 15,000 students were named Semifinalists, representing the top half of one percent of the nation's high school seniors. To ensure geographic representation, the highest-scoring eligible participants in each of the 50 states were designated. Each state's total of semifinalists is proportional to its percentage of the U.S. total of secondary school seniors.

Finalists survived a second test, received recommendations of their high school principals, and submitted school records. The number who became Merit Scholars was 3,928, of whom 1,000 received one-time awards of $1,000, the rest awards of up to four years of undergraduate study.

New York students won 279, or 7.1 percent, of the 1976 scholarships, Texas 275, or 7.0 percent; Ohio 271, or 6.9 percent; Pennsylvania 264, or 6.7 percent; California 259, or 6.6 percent; and Illinois 210, or 5.3 percent.

The National Achievement Scholarship Program for Outstanding Negro Students. The Achievement Scholarship Program operates in a somewhat similar fashion to the Merit Program. However, semifinalists represent 7 regional selection units. Black students may compete in both programs. Over 60,000 students entered the Achievement Program in 1976 to provide 1,200 semifinalists and then 584 Achievement Scholarships.

New York State students won 50, or 8.6 percent; Illinois 40, or 6.8 percent; Texas 39, or 6.7 percent; and California 35, or 6.0 percent.

NATIONAL MERIT AND ACHIEVEMENT PROGRAMS

	NUMBER TESTED IN 000's	NUMBER SCHOLARS	PERCENT OF NATIONAL	NUMBER TESTED IN 000's	NUMBER SCHOLARS	PERCENT OF NATIONAL
U.S.	1,040	3,928		61	584	
California	83	259	6.6	4	35	6.0
Connecticut	24	51	1.3	1	5	0.9
Illinois	57	210	5.3	5	40	6.8
Michigan	41	173	4.4	2	24	4.1
New Jersey	59	145	3.7	3	19	3.3
Pennsylvania	74	264	6.7	4	22	3.8
New York	132	279	7.1	8	50	8.6
Maryland	22	60	1.5	2	15	2.6
Ohio	49	271	6.9	3	29	5.0
Texas	53	275	7.0	3	39	6.7

National Merit Scholarship Corporation
Annual Report 1976, Table 1, p. 22.

WESTINGHOUSE SCIENCE TALENT SEARCH

The Science Talent Search is designed to discover at the high school level those who have the potentialities to become the research scientists and engineers of the future. The Westinghouse Educational Foundation has supported the Search annually since 1942. The Search is administered by Science Service, Washington, D.C. for the Science Clubs of America. The 1976-77 Search began with 13,281 contestants of whom 1,009 completed their entries by writing a report on their science project, submitting personal data and teacher recommendations. A panel of judges select an Honors list of 300 students considered so outstanding in science that any institution of higher learning will be justified in considering them for admission. From the list of 300 Honors, 40 are chosen as winners of a Washington trip in March. Judges select the top 10 to receive four-year Westinghouse Science Scholarships of $10,000 to $4,000; the remaining 30 receive Awards of $250 each; a total of $67,500.

The accompanying table shows the share of Honors and Winners attained by the states with the largest populations, largest cities, and concentration of business and industry. For 1976 and 1977 combined, New York State had 26 percent of the Honors; California, 7 percent. For 1976 and 1977 combined, New York State had 34 percent of the Winners; California, 5 percent. Their respective share of the high school graduates, public and non-public, was New York, 8.1 percent; California, 9.4 percent.

Clearly New York State is the national leader in the Science Talent Search.

The lower part of the table shows the marked influence of New York City High Schools on the State and national competition.

WESTINGHOUSE SCIENCE TALENT SEARCH

	1976				1977			
	HONORS		WINNERS		HONORS		WINNERS	
	NO.	%	NO.	%	NO.	%	NO.	%
United States	300		40		300		40	
California	28	9.3	3	7.5	16	5.3	1	2.5
New Jersey	11	3.2	3	7.5	8	2.7	--	
Connecticut	5	1.7	--		2	.7	--	
Pennsylvania	14	4.7	1	2.5	13	4.3	3	7.5
Michigan	7	2.3	1	2.5	5	1.7	--	
Illinois	16	5.3	3	7.5	10	3.3	--	
Maryland	12	4.0	2	5.0	11	3.7	1	2.5
Ohio	8	2.7	3	7.5	11	3.7	1	2.5
Texas	9	3.0	--		6	2.0	1	2.5
New York	74	24.7	13	32.5	83	27.7	14	35.0
Massachusetts	5	1.7	2	5.0	6	2.0	1	2.5
Nebraska	4	1.3	--		8	2.7	--	
Virginia	14	4.7	2	5.0	9	3.0	3	7.5
New York City	56	18.7	11	27.5	65	21.7	12	30.0
Bronx High School of Science	12	4.0	6	15.0	27	9.0	7	17.5
Stuyvesant	6	2.0	1	2.5	5	1.7	2	5.0
Cardozo	13	4.3	3	7.5	8	2.7	--	
Jamaica High School	7	2.3	--		4	1.3	1	2.5
Martin VanBuren	4	1.3	--		1	.3	1	2.5

Science Service, Washington, D.C. administering Science Clubs of America sponsors of Westinghouse Science Scholarships and Awards. (1) Honors Group and (2) Washington Trip Winners.

STANDARDIZED TESTS

Standardized tests exist in a number of subjects, mostly reading and arithmetic in elementary schools, but with a broader variety in secondary schools including social sciences, sciencies, and languages. Basically, such tests are used for student evaluation, teaching, guidance, and to some extent for program analysis. Since there is such a multiplicity of brands, comparisons across state lines are not possible. However, it is possible to compare New York State results to national scores.

Metropolitan Achievement Test Standardization. The Metropolitan Achievement Tests began over 50 years ago through the effort of the New York City Board of Education in collaboration with other large city boards. Several restandardizations have occurred, the latest being based on a Fall 1970 national population. The results were analyzed by type of school system and geographic region.[1] The regions were those used by the National Education Association, namely:

1. Total Standardization Sample

2. Northeast: Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont

3. Midwest: Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin.

---

1 Metropolitan Achievement Tests Special Report, 1970 Edition. Report #20. June 1971.

4. Southeast: Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, West Virginia

5. West: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oklahoma, Oregon, Texas, Utah, Washington, Wyoming

The regions were deemed rather equally balanced in population and homogeneous in socioeconomic status. Obviously, no individual state data are available, but the Northeast has 3 cities over a million population, Midwest 2, Southeast 0 and West 1.

The Northeast Region predominated in every grade reported for reading, mathematics, language, spelling, science, and social studies.

New York State Elementary School Basic Skills Mastery Study. In 1973-74 the New York State Education Department made a several-pronged study of standardized tests.[1] It showed that 90 percent of the State's public schools administered a reading test in one or more grades, 86 percent gave mathematics. Forty percent (40% of the scohools gave the Metropolitan Achievement Tests, 31 percent Iowa Tests of Basic Skills, 19 percent Stanford Achievement Tests, the rest using five other tests.

A sub-study equated the scores of Metropolitan and Iowa tests with the State's Pupil Evaluation Program tests, finding that results in third and sixth grade mathematics and sixth grade read-

---

1 New York State Education Department. Evaluation of Elementary and Secondary Education, pp. 21 ff. March 1974.

ing are about the same as national results, while in third grade reading results fell below national averages.[1]

Commercially-Published Standardized Tests Compared to Regents Examinations. Another study compared scores on New York State Regents Examinations with scores obtained nationwide on commercial tests.[2] Biology, English, French, Geometry, and Social Studies were tested in June 1973. Achievement for New York State students was found to be higher than for students nationwide in English and French, and at the same level in biology, geometry, and social studies.

Conclusion regarding standardized test results. The survey of standardized tests indicates that New Yorkers are generally superior to national norms, sometimes equal and rarely lower.[3]

---

1 New York State Education Department. A Study of Achievement in Reading and Mathematics of New York State Elementary School Students, p. i. August 1974.

2 New York State Education Department. Evaluation. Supra, pp. 37-45.

3 Ibid., p. 6.

1971 STANDARDIZATION
METROPOLITAN ACHIEVEMENT TESTS
(MEAN STANDARD SCORES)

REGION	GRADES: 2	3	4	5	6	7	8	9
				TOTAL READING				
U.S.	43.7	55.5	64.4	75.6	81.1	87.2	92.5	95.1
Northeast	44.4*	56.1*	65.8	77.0*	83.1*	90.0*	94.6*	97.7*
Midwest	44.1	55.8	65.5	76.9	81.9	88.8	93.9	97.2
Southeast	41.5	53.7	61.2	71.9	77.5	83.7	88.3	89.1
West	44.5	55.8	65.2	76.6	81.9	87.1	93.1	95.8
				TOTAL MATHEMATICS				
U.S.	45.5	60.8	73.1	83.7	90.4	97.2	103.3	107.3
Northeast	45.9	60.9	74.3*	84.8	92.3*	99.7*	105.1*	109.3
Midwest	46.5	61.7*	74.2	85.0*	91.4	98.4	104.9	110.1*
Southeast	42.6	59.0	70.7	80.9	87.5	93.6	99.6	102.4
West	46.7*	61.0	73.0	84.0	90.4	97.2	103.4	107.4
				LANGUAGE				
U.S.			70.6	79.9	85.1	89.2	94.3	96.3
Northeast			72.0*	81.5*	87.0*	91.8*	96.3*	98.7*
Midwest			71.3	80.7	85.6	90.7	95.8	98.0
Southeast			68.4	77.4	82.8	85.5	91.7	92.5
West			70.6	79.9	85.0	88.4	93.1	95.7
				SPELLING				
U.S.		57.1	65.3	76.6	83.1	89.9	95.6	98.1
Northeast		57.7*	66.3*	78.0*	85.0*	92.1*	97.2*	100.9*
Midwest		57.4	65.4	77.0	83.4	90.4	96.7	98.6
Southeast		55.9	64.1	75.1	81.1	88.2	93.6	95.0
West		57.1	65.5	76.3	82.9	88.8	94.5	97.0
				SCIENCE				
U.S.				78.5	83.6	89.2	94.0	96.1
Northeast				80.3*	85.3*	91.6*	95.6*	99.0*
Midwest				79.3	84.3	90.3	95.6*	86.9
Southeast				76.0	80.9	85.7	91.0	91.8
West				78.5	84.1	89.2	93.4	95.8
				SOCIAL STUDIES				
U.S.				79.1	85.2	90.5	96.1	99.5
Northeast				80.6*	87.0*	93.0*	98.4*	102.4*
Midwest				80.0	86.3	91.6	97.8	102.0
Southeast				76.6	82.5	87.4	92.8	93.9
West				79.3	85.2	89.7	94.9	99.2

*Region ranks first in grade.

NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS

In 1867 Henry Barnard became the first U.S. Commissioner of Education. During three years in office, his chief service was to institute an information gathering and dissemination system. The system lacked a major component until 1969 when the National Assessment of Educational Progress began gathering census-like information about levels of educational achievement across the nation. A sample of individuals is selected as representative of the entire country. Individuals are selected from four age levels, 9, 13, 17, and 26 through 35, corresponding to the end of primary school, junior high, high school, and young adulthood. They are classified according to region, sex, race, parental education, and size and type of community. Eleven subject areas were tested in the first round of assessment over a three year period. Assessment is periodically repeated so that eventually changes over time can be assessed for a wave of individuals as they grow older, and a group of a given age may be compared with another group of the same age several years later.

The analysis reported below compares the Northeast with the three other regions reported. Component states are as follows:

Northeast:

Delaware	Rhode Island	Massachusetts
Connecticut	Vermont	New Jersey
Main	District of Columbia	Pennsylvania
New Hampshire	Maryland	New York

Region

For the purposes of assessing educational achievement, the United States was divided into four geographical regions - the Northeast, Southeast, Central and West - as shown on the following map.

Source: National Assessment of Educational Progress. Update on Education, p. 17. 1975.

Central:

Iowa	South Dakota	Indiana
Kansas	Minnesota	Michigan
Nebraska	Missouri	Wisconsin
North Dakota	Illinois	Ohio

Southeast:

Arkansas	Alabama	Mississippi
Florida	Georgia	North Carolina
Virginia	Kentucky	South Carolina
West Virginia	Louisiana	Tennessee

West:

Alaska	Wyoming	New Mexico
Hawaii	Arizona	Oklahoma
Idaho	Oregon	California
Montana	Utah	Texas
Nevada	Colorado	Washington

The eleven subjects amenable to regional comparison are: citizenship, writing, literature, music, social studies, mathematics, science, career and occupational development, art, reading, and functional literacy. The analysis appears in the accompanying table; the figures represent the percent by which each region is above the national level.

1. Citizenship. The northeast ranks first at ages 9 and 13, second at age 17, and third for adults.
2. Writing. The northeast again ranks first at ages 9 and 13, third at age 17, and second for adults.
3. Literature. The northeast ranks second for the three lower age levels and first for adults.
4. Music. The northeast is first for age 9 and adults, second for ages 13 and 17.
5. Social Studies. The northeast is first by a large margin for the first three age levels, in third place for adults. (Like

mathematics. See below.)

6. Mathematics. The northeast is first by a large margin at ages 9, 13, and 17, in third place for adults. (Like Social Studies. See above.)
7. Science. The northeast was first in all three age levels tested, exceeding the Central region by progressively larger margins as age increased.
8. Career and Occupational Development. The northeast was first for 9-year-olds, yielding first place to the Central region at ages 13 and 17 and among adults.
9. Art. The northeast was first for 9 and 17-year-olds, ranking second for 13-year-olds.
10. Reading. The noreheast was second at ages 9, 13, and 17, yielding first place to the Central region.
11. Functional Literacy. The northeast was second, outpointed by the Central region in the 17-year-old age group, the only level tested.

For the 38 cells the leadership score is:

	AGE				
REGION	9	13	17	ADULT	TOTALS
Northeast	8	5	4	2	19
Central	2	4	5	2	13
West		1	2	3	6
Southeast					
Total	10	10	11	7	38

The northeast ranks first in half the subject-age categories--as often as do the other three regions combined. The northeast does best for 9-year-olds; edges out the central region for 13-year-olds; in turn is edged out by the central region at age 17 and by the west at the adult level. In no case does the northeast fall below the national average.

It is to be noted that National Assessment focuses upon practical and less academic matters, its goal being to assess the potential of Americans to cope with adult life in the United States.

NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS
PERCENT ABOVE NATIONAL LEVEL

SUBJECT	YEAR	REGION	AGE 9	13	17	ADULTS
Citizenship	1969-70	Northeast	1.9*	2.6*	1.9	0.9
		Central	0.1	1.1	1.0	1.0
		West	0.0	-0.4	2.4*	1.7*
		Southeast	-2.1	-3.4	-6.4	-5.0
Writing	1969-70	Northeast	3.5*	1.8*	0.3	1.9
		Central	0.8	1.6	2.2	2.9*
		West	-1.5	-0.6	4.1*	1.4
		Southeast	-3.1	-5.1	-7.8	-8.1
Literature	1970-71	Northeast	0.6	1.1	1.1	2.4*
		Central	2.4*	0.8	1.2*	0.0
		West	-0.5	1.2*	0.4	2.3
		Southeast	-4.0	-3.7	-4.4	-7.8
Music	1971-72	Northeast	2.9*	0.5	0.5	1.8*
		Central	1.5	1.5*	1.4*	0.9
		West	-1.9	-0.6	-0.8	0.1
		Southeast	-2.8	-2.2	-1.6	-3.9
Social Studies	1971-72	Northeast	2.9*	3.0*	2.5*	0.7
		Central	1.0	1.5	1.4	1.3
		West	-2.4	-1.2	-1.4	1.9*
		Southeast	-2.3	-3.5	-2.8	-5.1
Mathematics	1972-73	Northeast	2.9*	3.9*	3.4*	0.4
		Central	1.9	2.5	1.3	0.9
		West	0.0	-2.0	-0.4	1.3*
		Southeast	-5.6	-5.0	-5.2	-3.4
Science	1972-73	Northeast	1.7*	2.2*	1.8*	-
		Central	1.4	1.5	0.2	-
		West	0.6	-1.4	-1.1	-
		Southeast	-4.0	-2.8	-1.4	-
Career and Occupational Development	1973-74	Northeast	1.9*	1.4	0.4	0.0
		Central	1.6	1.8*	1.9*	2.3*
		West	0.0	-0.3	0.2	1.5
		Southeast	-4.4	-3.8	-3.7	-4.4

*Region ranks first in age category.

NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS
PERCENT ABOVE NATIONAL LEVEL (CON'D)

SUBJECT	YEAR	REGION	AGE 9	13	17	ADULTS
Art	1974-75	Northeast	1.7*	1.0	1.2*	-
		Central	1.4	1.2*	1.0	-
		West	-0.9	-0.4	0.3	-
		Southeast	-2.7	-2.2	-3.1	-
Reading		Northeast	1.6	1.4	1.5	-
		Central	2.3*	2.7*	2.4*	-
		West	-1.1	-0.9	-1.0	-
		Southeast	-3.4	-3.6	-4.2	-
Functional Literacy	1975	Northeast	-	-	0.5	-
		Central	-	-	1.6*	-
		West	-	-	0.2	-
		Southeast	-	-	-2.8	-

*Region ranks first in age category.

PUPIL EVALUATION PROGRAM

The Pupil Evaluation Program each Fall brings from each school and district achievement scores in grades 3, 6, and 9 reading and mathematics. It uses the New York State Examinations uniquely developed by the Department to agree with the philosophy and content of State curricula. One result is a tabulation of results showing number of candidates and average score for each county. For the present study, an average score was computed for 13 regions within the State as of Fall 1975.[1]

A perusal of the following tables gives insight into regional differences. Further, reference back to the county averages reveals in most cases the county on which attention focuses as a major upgrading factor within a region. Blank spaces under "Attention" indicate relatively uniform results within a region.

New York City results average markedly below upstate regions in every one of the 6 check points (2 subjects X 3 grades). In general suburban regions in the New York City Metropolitan Area and those centered by Albany and Binghamton-Ithaca lead the regions. Within two other regions the suburban effect is noticeable: Onondaga and Erie.

A quick brushstroke follows for each of the 13 intrastate regions, based upon PEP analyses.

1. New York City. Markedly below upstate at every point.

---

[1] The average score for each county was multiplied by its number of candidates. Candidates and scores were summed. The sum of scores was divided by the sum of candidates to yield a regional average.

2. Nassau-Suffolk. Consistently one of the top three. Nassau consistently above Suffolk.
3. Mid-Hudson. In top three in grade 3 but declining in grade 6 and 9 reading and in grade 9 mathematics. Rockland is the strongest county component.
4. Upper Hudson. In top four reading; second in grade 6 reading. Fifth or sixth in mathematics. Saratoga is the strongest component.
5. Lake George-Champlain. In both subjects, middle of the road in grades 3 and 6, with a marked decline in grade 9. Hamilton, with a tiny population, has the highest average score in both subjects in all three grades of any county in the State.
6. Black River-St. Lawrence. The region is lowest in upstate for grades 3 and 6 but improves markedly for grade 9. Lewis County is generally the bellwether of the region.
7. Upper Mohawk Valley. Well below average except for a rise to 4th position in grade 9 mathematics. Herkimer leads counties of the region in grades 3 and 6 mathematics.
8. Central. Middle of the road except for low averages in grade 6 reading and grade 9 mathematics. Onondaga County is consistently high-scoring within the region.
9. Southern Tier East. Always in the top three, it behaves much like Nassau-Suffolk, each sharing three firsts. Broome County is the consistent regional leader.
10. Southern Tier Central. Ranks very low (10th to 12th) except for below average in grade 9 mathematics (8th). Only three counties are involved, and county averages approximate the regional average.

11. Southern Tier West. Marked rise in reading from 10th in grade 3 to 2nd in grade 9, and in mathematics from 9th in grades 3 and 6 to 3rd in grade 9. Chautauqua County had the highest scores in the region at 3 of the 6 grade-subject test points.
12. Genesee-Finger Lakes. Below average in grade 3, rising to average in grade 9 in reading and mathematics. Ontario, Genesee and Seneca Counties improve scores at some measurement points.
13. Western. Consistently below average except for grade 3 mathematics. Wyoming and Erie Counties lead the other component county.

PUPIL EVALUATION PROGRAM 1975

GRADE 3

REGION	READING			MATHEMATICS		
	RANK	SCORE[a]	ATTENTION[b]	RANK	SCORE[a]	ATTENTION[b]
Nassau-Suffolk	1	31	Nassau	1	35	Nassau
Mid-Hudson	2	31	Rockland	3	35	Rockland
Southern Tier East	3	31	Broome	2	35	Broome
Upper Hudson	4	30	Saratoga, Greene, Schenectady	5	34	Schenectady
Lake George-Champlain	5	30	Hamilton	7	33	Hamilton
Central	6	30	Onondaga	6	34	Onondaga
Upper Mohawk Valley	7	30		8	33	Herkimer
Western	8	30		4	34	Erie
Genesee-Finger Lakes	9	30	Ontario	11	33	Genesee
Southern	10	29	Cattaraugus	9	33	
Black River-St. Lawrence	11	29	Lewis	12	32	Lewis
Southern Tier Central	12	29		10	33	
New York City	13	22		13	25	

a
Score: Rounded to nearest whole number; ranked according to two decimal positions.

b
Attention: County contributing highest score; blank means uniform regional score.

PUPIL EVALUATION PROGRAM 1975

GRADE 6

REGION	READING			MATHEMATICS		
	RANK	SCORE[a]	ATTENTION[b]	RANK	SCORE[a]	ATTENTION[b]
Southern Tier East	1	34	Broome	2	32	Broome
Upper Hudson	2	34	Saratoga	5	32	Saratoga
Nassau-Suffolk	3	33	Nassau	1	34	Nassau
Mid-Hudson	4.5[c]	33	Putnam, Rockland, Dutchess	3	32	Rockland
Southern Tier West	4.5[c]	33	Chautauqua	9	31	Chautauqua
Upper Mohawk Valley	6	33		7	32	Herkimer
Lake George-Champlain	7	33	Hamilton	4	32	Hamilton
Genesee-Finger Lakes	8	33	Ontario	6	32	Ontario
Western	9	33	Wyoming	10	31	Wyoming
Central	10	33	Cortland, Onondaga	8	31	Onondaga
Southern Tier Central	11	32		11	31	
Black River-St. Lawrence	12	32	Lewis	12	31	Lewis
New York City	13	26		13	25	

[a] Score: Rounded to nearest whole number; ranked according to two decimal positions.

[b] Attention: County contributing highest score; blank means uniform regional score.

[c] Tie score.

PUPIL EVALUATION PROGRAM 1975

GRADE 9

REGION	READING			MATHEMATICS		
	RANK	SCORE[a]	ATTENTION[b]	RANK	SCORE[a]	ATTENTION[b]
Southern Tier East	1	36	Tompkins, Broome	1	44	Tompkins, Broome
Southern Tier West	2	35		3	43	Chautauqua
Nassau-Suffolk	3	35	Nassau	2	43	Nassau
Upper Hudson	4	35	Saratoga	6	42	Saratoga
Genesee-Finger Lakes	5	35		7	42	Seneca
Mid-Hudson	6	35	Dutchess, Rockland	5	42	Rockland
Central	7	35	Onondaga	11	41	Onondaga
Black River-St. Lawrence	8	34	Lewis, Jefferson	9	42	
Western	9	34	Wyoming	10	41	Erie
Upper Mohawk Valley	10	34		4	43	
Lake George-Champlain	11	34	Hamilton	12	41	Hamilton
Southern Tier Central	12	34		8	42	
New York City	13	30		13	33	

[a] Score: Rounded to nearest whole number; ranked according to two decimal positions.

[b] Attention: County contributing highest score; blank means uniform regional score.

PUPIL EVALUATION PROGRAM
ADJUSTED FOR SOCIOECONOMIC INFLUENCES

A student's score on a test is affected not only be experience in school but also by interaction with the environment as represented by family life style and language usage and community factors. The Performance Indicators in Education (PIE) project analyzed many non-school characteristics resulting in finding four demographic measures which most predict school achievement, namely:

1. Total population
2. Percent adults with less than four years high school education
3. Percent engaged in profession or management
4. Percent under 18 living in father-mother family

The accompanying Tables show scores each region would be expected to have when the four characteristics above were known. The changes produced relative to the actual scores previously reported are as follows:

Grade 3 Reading. Lake George-Champlain would be expected in 10th positon but actually was 5th, indicating a favorable effort in schools in overcoming socioeconomic disadvantages. The Western region, expected in 12th position, actually was 8th, indicating a similar positive effect of schooling.

Grade 3 Mathematics. Lake George-Champlain's predicted score placed it 10th; actualy rank 7th--an effect attributable to school effort. Western New York shows the greatest upward effect of schooling, rising from 12th to 4th. The Genesee-Finger Lakes region dropped from an expected 6th position to an actual 11th, indicating less school effort than other regions.

Grade 6 Reading. Three regions, Genesee-Finger Lakes, Western, and Central, each rose three positions in rank above their expected or adjusted scores, indicating a favorable school effect.

Grade 6 Mathematics. Lake George-Champlain again showed a positive effect of schooling from an expected 10th rank to an actual 4th. The Central region had an opposite change, though less marked--a change of 3 ranks in position.

Grade 9 Reading. Genesee-Finger Lakes placed 5 positions above expectation in rank of reading scores adjusted for socioeconomic factors, and Southern Tier West 4 positions above expectation; Black River-St. Lawrence and Western regions were 3 positions above expectation--all four showing a favorable schooling effect. Mid-Hudson reversed the Southern Tier West experience; Lake George-Champlain reversed the Black River-St. Lawrence experience; Southern Tier Central reversed the Western region experience; Upper Mohawk placed 3 positions below where socioeconomic factors would place it--thus four regions showed that schooling did not overcome non-school factors.

Grade 9 Mathematics. Southern Tier West placed 6 positions above expectation in rank of mathematics scores, while the Central region lost 6 positions, showing the power of schooling to overcome socio-economic surroundings in the Southern Tier West. Upper Mohawk placed 3 ranks above expected scores, while Mid-Hudson showed the opposite condition.

In general, Western New York shows the greatest positive effect of schooling in overcoming demographic disadvantages.

PUPIL EVALUATION PROGRAM
SCORES ADJUSTED FOR SOCIOECONOMIC INFLUENCES

GRADE 3

REGION	READING			MATHEMATICS		
	RANK	SCORE[a]	ATTENTION[b]	RANK	SCORE[a]	ATTENTION[b]
Nassau-Suffolk	1	31	Nassau	1	35	Nassau
Mid-Hudson	2	30	Putnam	2	35	Putnam
Southern Tier East	3	30	Broome	3	34	Broome
Upper Hudson	4	30	Saratoga	4	34	Saratoga, Schenectady
Central	5	29		5	33	
Upper Mohawk Valley	6	29		7	33	
Genesee-Finger Lakes	7	29		6	33	
Southern Tier West	8	29		9	33	
Southern Tier Central	9	29		8	33	
Lake George-Champlain	10	29	Hamilton	10	33	Hamilton
Black River-St. Lawrence	11	28		11	32	
Western	12	28	Niagara, Wyoming	12	31	Niagara, Wyoming
New York City	13	22	Richmond, Queens	13	25	Richmond, Queens

[a] Score: Rounded to nearest whole number; ranked according to two decimal positions.

[b] Attention: County contributing highest score; blank means uniform regional score.

PUPIL EVALUATION PROGRAM
SCORES ADJUSTED FOR SOCIOECONOMIC INFLUENCES

GRADE 6

REGION	READING			MATHEMATICS		
	RANK	SCORE[a]	ATTENTION[b]	RANK	SCORE[a]	ATTENTION[b]
Nassau-Suffolk	1	34		1	33	
Mid-Hudson	2	33	Putnam	2	32	Putnam
Southern Tier East	3	33	Broome	3	32	Broome
Upper Hudson	4	33	Saratoga	4	32	Saratoga
Lake George-Champlain	5	33	Hamilton	10	31	Hamilton
Southern Tier-West	6	33		8	31	
Central	7	33		5	31	
Upper Mohawk Valley	8	33		7	31	
Southern Tier-Central	9	33		9	31	
Black River-St. Lawrence	10	33		11	31	
Genessee-Finger Lakes	11	32		6	31	
Western	12	31	Wyoming	12	30	Wyoming
New York City	13	26	Richmond, Queens	13	25	Richmond, Queens

a
Score: Rounded to nearest whole number; ranked according to two decimal positions.

b
Attention: County contributing highest score; blank means uniform regional score.

PUPIL EVALUATION PROGRAM
SCORES ADJUSTED FOR SOCIOECONOMIC INFLUENCES

GRADE 9

REGION	READING			MATHEMATICS		
	RANK	SCORE[a]	ATTENTION[b]	RANK	SCORE[a]	ATTENTION[b]
Nassau-Suffolk	1	36		1	44	Nassau
Mid-Hudson	2	35	Putnam	2	43	Putnam, Tompkins
Southern Tier East	3	35		3	43	Broome
Upper Hudson	4	35	Saratoga	4	42	Saratoga
Central	5	35		5	42	
Southern Tier West	6	34		9	41	Allegeny
Upper Mohawk Valley	7	34		7	42	
Lake George-Champlain	8	34	Hamilton	10	41	Hamilton
Southern Tier Central	9	34		8	41	
Genesee-Finger Lakes	10	34		6	42	
Black River-St. Lawrence	11	34		11	41	
Western	12	34	Wyoming	12	41	
New York City	13	30	Richmond, Queens	13	34	Queens, Richmond

[a] Score: Rounded to nearest whole number; ranked according to two decimal positions.

[b] Attention: County contributing highest score; blank means uniform regional score.

SUMMARY

College Entrance Examinations show New York state produces the largest number of high-scoring high school graduates of any state. Drawing upon the data pool established by the College Board and adding new criteria are the Advanced Placement Examinations which show New York students qualify in high school for college credits more than any students in other states. The National Merit and Achievement Scholarship Program, using even sharper criteria, shows that New York high school graduates outpoint their counterparts in the other 49 states. The Westinghouse Science Talent Search is even more selective, and New Yorkers form an even larger proportion of the group.

In standardized tests, New York and the Northeast States, of which it is a part, outpoint national and regional averages.

Within the State, analysis indicates the leading regions in reading and mathematics are in the Metropolitan New York Area and the Albany and Binghamton-Ithaca Region. When scores are further analyzed, the Western New York Region appears to be doing most in schools to overcome demographic conditions.

New York City represents a quality paradox, averaging so far below on the Pupil Evaluation Program as to constitute a population different from the rest of the State but with high school graduates outpointing the whole nation in the Westinghouse Science Talent Search.